SECTION 6 - MONITORING PROGRAM AND REPORTING PLAN

The following monitoring and reporting requirements become effective immediately. All monitoring and reporting activities shall be in accordance with the General Provisions for Monitoring and Reporting dated September 1, 1994, which are attached to the General Permit

A. MONITORING PROGRAM OBJECTIVES

- Ensure that storm water discharges, non-storm water discharges, and discharges associated with maintenance dredging are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in the General Permit.
- Ensure practices at the marina intended to reduce or prevent pollutants in surface water discharges, storm water discharges, and non-storm water discharges are evaluated and revised to meet changing conditions.
- Aid in the implementation and revision of the SWPPP.
- Measure the effectiveness of best management practices (BMPs) intended to reduce or prevent or pollutants in storm water discharges.

B. NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS: MONTHLY OBSERVATIONS DURING MARINA OPERATING SEASON

TKM must perform monthly visual observations for non-storm water discharges:

- Monthly during each marina operating season
- During scheduled marina operating hours;
- Within each drainage area shown in Figure 3 (A through F);
- During daylight hours when no storm water discharges are occurring; and

The TKM observations shall be recorded on the Monthly Non-Storm Water Visual Observation Record form in Appendix A. The observation record shall indicate if any of the following is **present** and, if present, the **suspected source**: discolorations, stains, odors, floating materials, and other abnormal conditions.

If unauthorized non-storm water discharges are observed, then the Monthly Non-Storm Water Discharge Visual Observation Record shall also indicate the action taken to identify the source and eliminate the discharge.

C. STORM WATER DISCHARGE VISUAL OBSERVATIONS: FOUR OBSERVATIONS DURING MARINA OPERATING SEASON

TKM must perform observations of storm water discharges:

- Four storm events during each marina operating season;
- During scheduled marina operating hours;
- At each discharge point shown in Figure 3 (Discharge Points 001 through 006);
- During the first hour after the storm water discharge begins; and

However, storm water discharge observations are only required:

- During daylight hours and
- On days preceded by three working days of dry weather (with no wet weather on the intermediate non-working days).

Storm water discharge observations are not required during dangerous weather conditions.

The TKM observations shall be recorded on the Storm Water Visual Observation Record form in Appendix A. The observation record shall indicate if any of the following is **present** and, if present, the **suspected source**: floating and suspended materials, oil and grease, discolorations, turbidity, odor, and other abnormal conditions.

The TKM observations shall be recorded on the Monthly Non-Storm Water Visual Observation Record form in Appendix A. The observation record shall indicate if any of the following is **present** and, if present, the **suspected source**: stains, discolorations, odors, floating materials, engine coolant discharges, and other abnormal conditions.

If pollutants are noted, the source, and actions taken to reduce or prevent pollutants in the storm water discharge shall also be noted on the Storm Water Discharge Visual Observation Record form.

D. STORM WATER SAMPLING: TWO SETS OF SAMPLES DURING MARINA OPERATING SEASON

TKM must collect samples of storm water discharges:

- Two storm events that occur during each marina operating season;
- During the first hour after the storm discharge begins for:
  1. If possible, the first storm event which occurs after the marina reopens in the Spring of each year and
  2. At least one other storm event which occurs before the marina operating season ends in the Fall.

However, collection of storm water discharge samples is only required:

- During daylight hours; and
- On days preceded by three working days of dry weather (with no wet weather on the intermediate non-working days).

Storm water discharge sampling is not required during dangerous weather conditions.

Sample Locations And Method

Location

Samples shall be collected at Discharge Points 002, 004, 005, and 006. The Discharge Points to be sampled are described Table 6-1 and are shown in Figure 3. Samples collected at those locations are representative of all runoff from the industrial activities occurring at the marina, including runoff from the associated parking lot.

The storm water runoff at Discharge Points 001 and 003 (shown in Figure 3)does not have to be sampled since it will be substantially identical to the runoff that would be expected at Discharge Points 002 and 004. However, even though Discharge Points 001 and 003 will not be sampled, TKM must still perform visual observations at these locations to verify that storm runoff at these locations does not appear polluted.

It is possible that offsite runoff containing sediment from the unpaved areas located east of the TKM property may enter Drainage Areas A through E. If visual observations or collected samples show sediment in TKM runoff, the TKM inspector should check to verify that offsite runoff is the source. Since most of the TKM property is paved or developed, storm runoff from the TKM would not be expected to contain much sediment.

Table 6-1

Storm Water Sample Collection Locations

Discharge Point	Drainage Area	
	Designation	Description
002 (drain inlet)	B	Vehicle Parking
004 (drain inlet)	D	Boat Servicing, Waste Oil, Vehicle Parking
005 (pavement runoff)	E	Fuel Storage, Vehicle Parking
006 (discharge from detention basin)	F	Boat Storage

Constituents to be Monitored/Analytical Method

Method

All samples collected shall be grab samples.

Constituents

Constituents to be analyzed in storm water samples are listed on Table 6-2.

Analytical Method

The analytical methods used to determine the presence of the above listed constituents shall be the methods specified in Table 6-2. Each of the designated analytical methods is in accordance with the U.S. EPA approved test procedures listed in 40 CFR 136.

Table 6-2

Constituents to be Monitored in Storm Water Samples

	Minimum Constituents	Analytical Method	Laboratory Reporting Limit	Number and Type of Container	Sample Volume	Sample Preservation	Maximum Hold Time Prior to Analysis
1	General						
	a. pH	EPA 150.1	N.A.	1 Polyethylene	250 ml	Place sample in cooler with blue ice and ship overnight to lab for analysis.	As Soon as Possible
	b. Turbidity	EPA 180.1	0.1 turbidity units				48 hours
	c. Specific Conductance (EC)	EPA 120.1	1 mmhos/cm				28 days
2	Total Nitrogen	SM4500-NO3E and SM4500-NH3	0.10 mg/l	1 Polyethylene	250 ml	Place sample in cooler with blue ice and ship overnight to lab for analysis. Sample container will already contain small amount of sulfuric acid preservative. *	28 days
3	Total Phosphorus	SM4500-PE	0.008 mg/l	One Amber Glass Bottle	250 ml	Place sample in cooler with blue ice and ship overnight to lab for analysis. Sample container will already contain small amount of hydrochloric acid preservative. *	28 days

Notes:
* The sampler shall be careful to prevent bodily contact with acid preservative in sample container.
NA Not applicable

Sample Volumes, Containers, Preservation, Delivery to Laboratory and Labeling

All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). Samples shall be collected and delivered to the laboratory for analysis within 24 hours of sample collection.

The following grab samples shall be collected at each designated Discharge Point. Sample container, volume, preservation, and maximum hold time requirements are summarized in Table 6-2. All samples shall be properly preserved and delivered to the laboratory for analysis. Maximum hold times shall be observed by TKM and the laboratory.

1. Collect one 250 ml storm water sample in a polyethylene container to determine:

    a) pH
    b) Turbidity
    c) Specific Conductance (EC)

    Sample Preservation: Cool to 4 degrees C.

2. Collect one 250 ml storm water sample in a polyethylene or equivalent container to determine Total Nitrogen

    Sample Preservation: Cool to 4 degrees C and ship overnight to the laboratory (sulfuric acid shall be added to the container by the lab prior to sample collection).

3. Collect one 250 ml storm water sample in an amber bottle to determine Total Phosphorus.

    Sample Preservation: Cool to 4 degrees C and ship overnight to the laboratory. (hydrochloric acid shall be added to the sample container by the lab prior to sample collection).

    All samples shall be labeled identifying the date and time of sample collection, Discharge Point (sample location), type of analysis required, and initials of sample collector.

Chain of Custody

TKM employees shall complete and sign the Chain of Custody form provided by the analytical laboratory performing the analyses. The purpose of the form is to document sample collection, handling, and release of the samples to the laboratory.

Sample Analyses

All analyses must be conducted according to the analytical methods shown in Table 6-1.

All monitoring instruments and equipment shall be calibrated and maintained in accordance with the manufacturer's specifications to ensure accurate measurements.

All analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services.

E. MAINTENANCE DREDGING SAMPLING AND OBSERVATIONS

1) Prior to the start of dredging, TKM is required to

   a) Collect background water samples from the area to be dredged and have the samples analyzed for the constituents shown in Table 6-3.

Table 6-3

Constituents to Be Determined in Samples Showing Background Water Quality

Constituent	Units	Reporting Limit (PQL)
Total Nitrogen (as N)	mg/l	0.1 mg/l
Phosphate (as P)	mg/l	0.008 mg/l
Total Iron	mg/l	0.01
Turbidity	NTU	0.1
Grease and Oil	mg/l	10

   b) Collect samples of sediment in the inner marina near the area to be dredged and have analyzed for:

Table 6-4

Constituents to Be Determined in Samples Showing Inner Marina Sediment Quality

Constituent	Units	Reporting Limit (PQL)
Total Petroleum Hydrocarbons (Gasoline)	mg/kg	0.5 mg/kg
Total Petroleum Hydrocarbons (Diesel)	mg/kg	1 mg/kg
Polycyclic Aromatic Hydrocarbons	mg/kg	0.2
Benzene, Toluene, E-benzene, and Xylenes	mg/kg	0.01

2 During dredging activities, TKM is required to perform continual visual observations of the containment structures and dredging equipment to ensure total containment of disturbed sediments and the absence of illegal discharges

If turbidity plumes are detected outside of the containment structures and/or petroleum sheens are detected outside protective oil barriers, the observations shall describe the immediate actions that were taken to correct the problem.

3 Prior to the removal of any in-lake containment structure, TKM must collect a composite water sample within the containment structure consisting of individual grab samples collected from three (3) locations within the containment area. The samples shall be analyzed for the constituents listed in Table 6-3.

The containment structure shall not remove any containment structure until TKM has received approval from the Regional Board Executive Officer based on the water sampling results.

4 The results from all required water and soil analyses shall be submitted to the Regional Board within thirty (30) days after the containment structure is removed.

F. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROGRAM

TKM employees are required to implement a QA/QC Program to assure:

1. All elements of the Monitoring Program are conducted; and

2. All monitoring is conducted by trained personnel.

The QA/QC Program shall consist of the following procedures:

1. Storm Water Monitoring Program Checklist

TKM employees shall use the Monitoring Program Checklist form and other forms in Appendix A to document all required elements of the Monitoring Program are completed. The forms can also be used to document reasons for TKM inability to perform required monitoring or reasons for any other noncompliance with monitoring requirements.

2. Annual Program Evaluation

The Annual Comprehensive Site Compliance Evaluation shall include:

a. An evaluation of the effectiveness of the monitoring program in achieving the Monitoring Program Objectives (see Section 6.A. Monitoring Program Objectives).

b. Discussions with TKM personnel regarding proper monitoring methods.